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(19)日本国特許庁 (JP)

(12) 公開特許公報 (A)

(11)特許出願公開番号

特開平10-330150

(43)公開日 平成10年(1998)12月15日

(51)Int.Cl.*

識別記号

F I

C 0 4 B 35/04

C 0 4 B 35/04

Z

35/10

H 0 1 L 21/68

N

35/443

C 0 4 B 35/10

Z

H 0 1 L 21/68

35/44

1 0 1

審査請求 未請求 請求項の数1 O L (全 7 頁)

(21)出願番号

特願平9-142680

(71)出願人 000006633

京セラ株式会社

京都府京都市伏見区竹田烏羽殿町6番地

(22)出願日 平成9年(1997)5月30日

(72)発明者 早崎 哲治

鹿児島県国分市山下町1番1号 京セラ株

式会社鹿児島国分工場内

(54)【発明の名称】 耐食性部材

(57)【要約】

【課題】フッ素系や塩素系等のハロゲン系腐食性ガスが存在する雰囲気下でのプラズマに対して優れた耐食性をする耐食性部材を提供する。

【解決手段】耐食性部材を、酸化物換算でMgOを15重量%以上、Al₂O₃を85重量%以下の範囲で含有し、MgO、MgAl₂O₄とMgO、MgAl₂O₄、MgAl₂O₄とAl₂O₃のいずれかの結晶相からなり、上記結晶相の平均結晶粒子径が3μm以上でかつ気孔率が0.2%以下であるセラミック焼結体により形成する。

ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

Tom,

Here is one of several data summaries from Japanese patent applications.

(21)Application number: 09142680

(71)Applicant:

KYOCERA CORP

(22)Date of filing: 30.05.1997

(72)Inventor:

HAYAZAKI TETSUJI

(54) CORROSION RESISTANT MEMBER

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a corrosion resistant member having an excellent corrosion resistance against plasma in an atmosphere containing a halogen-based corrosive gas such as a fluorine-based or chlorine-based gas.

SOLUTION: This corrosion resistant member is composed of a ceramic sintered compact comprising 15 wt.% MgO and 85 wt.% Al₂O₃, in terms of oxides, having any crystal phase of MgO, MgAl₂O₄ and MgO, MgAl₂O₄, and MgAl₂O₄ and Al₂O₃, further having > 3 m average crystalline particle diameter of the crystal phase and having 0.2% porosity.

ATTORNEY-CLIENT PRIVILEGED COMMUNICATION

Tom,

Here is one of several data summaries from Japanese patent applications.

H08-208338

(21)Application number: 07014820

(71)Applicant:

KYOCERA CORP

(22)Date of filing: 31.01.1995

(72)Inventor:

**KAWABE YASUNORI
KUCHIMACHI KAZUICHI
INOUE HIRONORI
NAGANO SABURO**

(54) CORROSION RESISTANT MEMBER AND WAFER HOLDING DEVICE

(57)Abstract:

PURPOSE: To obtain a corrosion resistant member and a wafer holding device excellent in corrosion resistance in halogen-base corrosive gas so that the device does not contaminate wafers, by specifying the atms. of AlN and Si and forming an aluminum nitride sintered compact.

CONSTITUTION: Only a binder and a solvent are added to an AlN powder as the start source material having 3 m average particle size, 99% purity and 1500ppm Si content as impurity to prepare a slurry. The slurry is formed by a doctor blade method or dried by a spray dryer to obtain a granulated material, which is then supplied in a die and compacted by a mechanical press compacting method or rubber press compacting method. Then the compacted body is degreased in vacuum and fired in a nonoxidative atmosphere at 1900-2100°C to obtain a corrosion resistant member comprising an aluminum nitride sintered compact having 99% purity, 1500ppm Si content and 5-50 m average grain size. Since the obtd. member has high thermal conductivity and contains a little amt. of impurities which affect the wafers, it is suitable to obtain a wafer holding device.

	No	AIN 含有量 (重量%)	焼結助剤含有 量 (重量%)	Si含有量 △	経過時間	Etch time (hr) ?			
						100 時間	200 時間	400 時間	800 時間
本 発 明	1	99.5	—	400 ppm	○	○	○	○	○
	2	99.5	—	500 ppm	○	○	○	○	○
	3	99.4	—	1000 ppm	○	○	○	×	
	4	99.4	—	1500 ppm	○	○	○	×	
	5	99.1	—	1000 ppm	○	○	○	×	
比 較 例	6	99.4	—	2000 ppm	×	×	×	×	×
	7	96.4	Y ₂ O ₃ - 3	500 ppm	×	×	×	×	×
	8	96.0	Y ₂ O ₃ - 3	2000 ppm	×	×	×	×	×
	9	96.4	Er ₂ O ₃ - 3	500 ppm	×	×	×	;	×
	10	91.5	Y ₂ O ₃ - 8	500 ppm	×	×	×	×	×
	11	91.2	Y ₂ O ₃ - 8	2000 ppm	×	×	×	×	×

○: 0.3 μm以下のパーティクル数が15個未満

Less than 15 0.3um particles

×: 0.3 μm以下のパーティクル数が15個以上

More than 15 0.3um particles